

Botany Evolution LLC

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

Certificate Of Analysis**Sample Identification Information**Date of Analysis 11/9/2017Sample: S0245Product Name LATERAL ROOTSLot# SIV171004LRCountry of Origin SOLOMON ISLANDSCountry of Processing SOLOMON ISLANDSManufacture Date 10/04/17Expiration Date 10/04/20**General Product Specifications**Product Species Piper MethysticumPart Used RootCommon Names Kava kava, Awa, YagonaAppearance Beige powder

<u>Analyzed Characteristics</u>	<u>Specification</u>	<u>Result</u>	<u>Test Method</u>
<u>Standardization</u>	2-15% Kavalactones	14.27%	HPLC
<u>Identification</u>	Complies by HPLC	Conform	HPLC
<u>Kavalactone Profile</u>	Noble	PASS	HPLC
<u>Mesh Size</u>	60-30	60	Sieve
<u>Color</u>	Beige to Yellow	Pass	Visual
<u>Odor</u>		Pass	Organoleptic
<u>Taste</u>		Pass	Organoleptic
<u>Chemotype</u>		245631	HPLC
<u>K/DHM</u>		1.57	Calculation

Kavalactones	Code	Peaks Ref.	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2901.86			
Methysticin	M	1	2.19	1677.961	12.72%	1.77%	6
Dihydromethysticin	DHM	2	3.23	1161.819	8.81%	1.81%	5
Kavain	K	3	1	5909.965	44.81%	2.85%	4
Dihydrokavain	DHK	4	4.21	2506.054	19.00%	5.08%	2
Desmethoxyyangonin	Y	5	2.74	917.515	6.96%	1.21%	1
Yangonin	DMY	6	3.16	1016.078	7.70%	1.55%	3
Kavalactones			Total:	13189.392	100.00%	14.27%	245631

*See data in attachment HPLC1100 Agilent Certificate with Chromatogram graph.

This result are in house tested and the best of our knowledge and experience. Using calibrated equipment.

We are dedicated to offer the best Quality of Botanical products on the market. We test and stand behind our products.

Disclaimer* the test results are accurate to the best of our knowledge and are based upon reputable laboratory and industry standard testing methods.

These results should not be used as a final determination for use in a finished product. It is recommended that you verify these test results with an in house quality control department or obtain an additional independent third party lab to verify that this material meets specifications

Botany Evolution, its board of directors, contract laboratories, employees, and affiliates are held harmless from any loss or damages resulting from the use or misuse of this document. The appropriate use of this product is the sole responsibility of the user of the purchasing party.

Mustel Youngs 11/10/17

SAMPLE S0245
 Vial 16

0.76533g/50ml

wavelength 246 nm

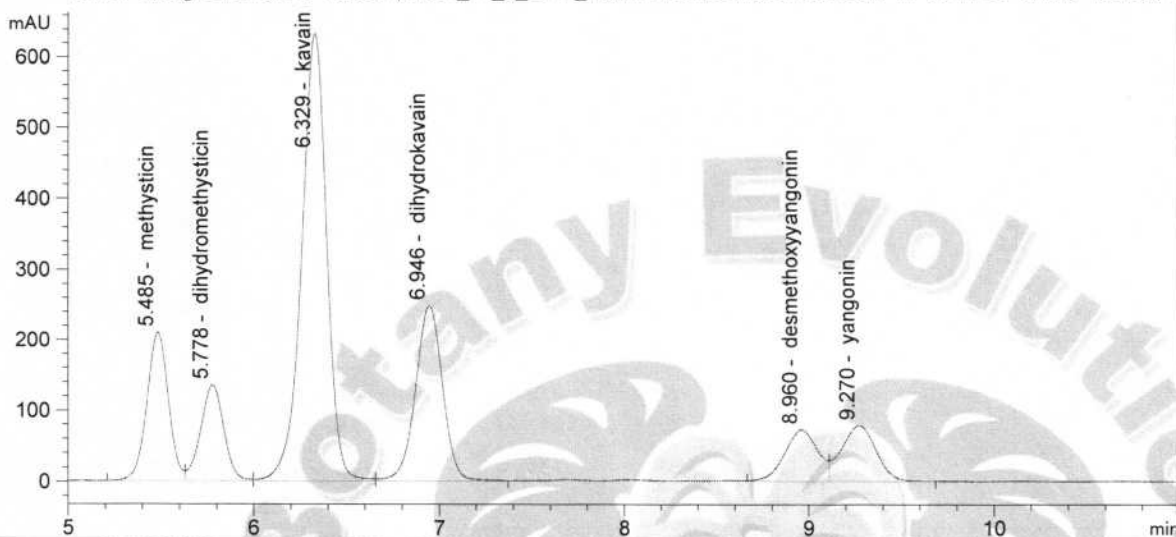
C:\CHEM32\1\DATA\KAVA_11_9_2017_15MINSTDTESTMETHOD 2017-11-09 17-29-07\016->
 SEQUENCE C:\CHEM32\1\DATA\KAVA_11_9_2017_ ->

Injection date 11/9/2017
 Injection time 10:04:05 PM

Acq. operator KRISTL

Method C:\CHEM32\1\DATA\KAVA_11_9_201->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_11_9_2017_15MINSTDTESTMETHOD 2017-11-09 17-29-07\016-1601.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.485	1677.961	12.72	0.000
2	dihydromethysticin	5.778	1161.819	8.81	0.000
3	kavain	6.329	5909.965	44.81	0.000
4	dihydrokavain	6.946	2506.054	19.00	0.001
5	desmethoxyyangonin	8.960	917.515	6.96	0.000
6	yangonin	9.270	1016.078	7.70	0.000

Handwritten signature and date:
 M
 11/10/17